

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## A2CC: Review Sheet for Exam 1 Quarter 1

This review sheet is not comprehensive. Please look over your notes and homework assignments to prepare fully spending time specifically on questions that you struggled with. **PLEASE DO ALL WORK ON SEPARATE LINED PAPER. This assignment is due Monday, September 19<sup>th</sup>. Exam 1 is on Tuesday, September 20<sup>th</sup>.**

**In 1-8, simplify each expression and write it without negative exponents. All variables represent positive numbers.**

1.  $\frac{20x^{-3}y^5}{4x^{-2}y^4}$

2.  $(2c^{\frac{1}{2}}d)(c^{\frac{3}{2}}d^{-1})$

3.  $(12a^{\frac{1}{5}})^0$

4.  $\frac{(2a^2b^4)^2}{2a^3b^{-5}}$

5.  $\sqrt{36x^7y^{11}}$

6.  $-2\sqrt[3]{24x^8y^{10}z^{18}}$

7.  $(5c^{-3}d^{-6}e^2)(2c^{-4}d^{-2}e^{-2})$

8.  $(3a^2b^4)^3(2a^{-4}b)^{-1}$

**In 9-28, perform the indicated operation, and write each answer in simplest form.**

9.  $\sqrt{90} + \sqrt{40}$

10.  $\sqrt{98} - 2\sqrt{18}$

11.  $2\sqrt{5} \cdot \sqrt{15}$

12.  $\frac{6\sqrt{60}}{24\sqrt{3}}$

13.  $\sqrt{3}(2\sqrt{27} - \sqrt{6})$

14.  $(2 + \sqrt{5})(3 - \sqrt{5})$

15.  $\frac{3}{5}\sqrt{75a^4b^6c} - \frac{1}{2}\sqrt{192a^4b^6c}$

16.  $18\sqrt[3]{32y^7} + 6\sqrt[3]{4y}$

17.  $3\sqrt{4a^3} - 6\sqrt{9a^3}$

18.  $3a^2b^3(4a^3b - 3a^2b^2 + 5ab^3)$

19.  $(7y+2)(7y-2)$   
20.  $(7x-2)(5x+8)$   
21.  $(2x-5)(3x^2+x-4)$   
22.  $(2x^2-3x+4)(3x^2+2x-1)$   
23.  $\frac{\sqrt{2}}{\sqrt{5}-3}$   
24.  $\frac{\sqrt{2a^3b}}{\sqrt{6a}}$   
25.  $\frac{3+\sqrt{5}}{3-\sqrt{5}}$   
26.  $(2\sqrt{6}+\sqrt{5})^2$   
27.  $\frac{\sqrt[3]{48x^7}}{\sqrt[3]{2x}}$   
28.  $\frac{8\sqrt{20x^8}-4\sqrt{10x^3}}{2\sqrt{5x}}$

**In 29-31, solve each equation.**

29.  $4(x+4)=x+2(x+11)$   
30.  $3x-7=2-(2x+6)$   
31.  $14+3(x+2)=3+2(x+9)$

**In 32-34, use your graphing calculator find the zeros of each of the following polynomials.**

32.  $x^3-5x^2+4x$   
33.  $x^4-3x^3-8x^2+12x+16$   
34.  $x^4-3x^3-37x^2+27x+252$